

the Gentiles should come and destroy it again." Whereas I conceive the word "Zion," as here used, merely means the City of Jerusalem.

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ON THE CONSTRUCTION OF PRISONS.*

RESUMING the consideration of this subject, another important object to be obtained is a perfect sewerage, and a complete and speedy removal of all substances and fluids which, exhalating noxious effluvia, must prove most destructive to health. This, together with a wholesome system of ventilation (of which I shall speak more fully hereafter), are points which too often receive but very indifferent attention, and yet are those on which much depends. It will of course be a considerable advantage obtained to keep, under the rules of the system, a large number of prisoners with as few officers as possible; but I have found, in many instances, that too strict an observance of this principle has rendered the discipline exceedingly defective, and much devolves upon the architect to make such provisions for officers as he thinks will be suitable in proportion to the number of prisoners. The entire front of the building should, in my opinion, be devoted to the accommodation of persons connected with the superintendence of the prison; with suitable residences for the governor and chaplain equidistant from the centre. Those portions should project from the main building, and be supplied with private entrances so as to afford seclusion to themselves and families from the rest of the apartments appointed for the minor officers of the prison; but care should be also taken that means be afforded of immediate communication with the rest of the building when desirable. Although I am a great advocate for the buildings being constructed on a principle of "radiation," as proposed and effected by the model plans on the Pentonville system, and which have been considered as the *ac plus ultra* of perfection, yet I must say that when it is intended to accommodate male and female prisoners, I think that its principles are still open to suggestions for improvement. So many instances have occurred of communication taking place in consequence of inattention to proper discipline, but more particularly on account of a mal-arrangement in the plan, that this is a very material point to be considered. In order to carry out the discipline fully, the male officers should be separated from the females, in the same manner as the prisoners, and in fact the plan should be so designed as to construct two prisons in one building, and, though in immediate connection, so arranged as that the inhabitants of one may no more interfere with the other than if they never existed. This cannot be effected by the plan above alluded to, and as the male and female prisons radiate from the same central point or inspection hall, the consequence must be, that opportunities of communication are afforded, which by some consideration could be prevented. The method by which I propose to obviate this difficulty, without interfering with the principles of radiation, is, by having separate halls for the reception of male and female prisoners placed at each side of the centre building, appropriated as officers' apartments, leading by corridors to inspection halls, from which the buildings designed for the males, and those for the females, respectively radiate. By this means the object will be completely gained, and no intercourse of any kind whatsoever can take place between the officers of the different sides of the prison. I could, from my own personal knowledge, enumerate many instances of communication of the most disgraceful description occurring in prisons where this defect exists, but I trust that the mere reference to its destructive principles will be sufficient to aid in guarding against them, without requiring me to enter into a minute catalogue of those which have come under my own immediate observance. It is also the fact that in some prisons where the silent system is carried out (or rather attempted), female nurses attend sick male patients in the hospital wards, and sleep in rooms immediately contiguous to them. This is a point so glaringly defective, that it requires but very little comment, and by some foresight on the part of the architect, many of those de-

ficiencies, and the bad results arising therefrom, could be easily prevented. Each corridor should be under the care of at least one officer, who, by his humane and affable disposition, would be suited for the discharge of the responsible duties which are imposed upon him. Suitable provision should therefore be made for one at an extremity of each corridor. So much depends upon the prudence and generosity which the officers exhibit to those under their charge, that a great deal of care should be taken in the selection of sober, steady, and intelligent persons to fill these situations. I would suggest that at another extremity of each corridor a wash room should be provided, not for ordinary purposes, but that the prisoners may occasionally have the opportunity of bathing themselves, and effecting a thorough cleansing of their persons. This will be found most conducive to health. As an occasional change of wearing apparel is absolutely necessary, fumigating apartments with steaming apparatus complete should be fitted up in the basement story, for the purpose of removing vermin and all infectious tendencies which the clothes may have acquired. It would be desirable in large prisons to supply such accommodation as is necessary for religious distinctions. In almost all the buildings which I have inspected, I remarked that there is a great inattention paid to this point, and that it is too often looked upon as a minor one, while it is in fact very material and deserving of much consideration. Great inconveniences must arise from the celebration of the ceremonies of different persuasions in the same apartment, not to speak of the infringement of moral principles which this arrangement causes, and I think that there should be separate accommodation provided for the followers of each persuasion. I do not of course mean that there should be a distinct place of worship for the disciples of every sect which is likely to exist in a prison, but I wish to show that suitable distinction should be made between those which require apartments differently constructed and fitted up for the practice of their respective ceremonies. A church and chapel will effect the required objects. The seats would be so arranged in each as to prevent prisoners from seeing each other, at the same time affording them an opportunity of having a perfect view of the officiating clergymen.

Infirmarys should be constructed at each side of the building for the accommodation of both sexes, consisting of sick wards, surgical ward, operation room, and convalescent ward, together with a bath room and nurse's apartments. Independent of these it would be well to construct apartments (with all necessary appendages) for patients suffering from fever and all other contagious diseases, in order to prevent their spreading to the rest of the inmates. Spacious airing grounds should be in immediate connection with each infirmary, and all the arrangements planned to afford facilities for carrying out the system.

To the juvenile departments of the prison school-rooms should be attached for instruction, fitted up with seats similar to the chapel, and supplied with a pulpit, from which the teachers have full inspection of their pupils; and adjoining these rooms there ought to be apartments provided for the accommodation of the master and mistress.

The kitchen, culinary offices, &c., should be so arranged as to prevent the intercourse above alluded to, and to admit of the discipline being carried out as fully in this as well as other portions of the building. I think it would be advisable to place at each side of the prison such offices as are best suited to each sex; for instance, the laundry and all necessary accommodation at the female side; and the bake-house, with the requisite stores, at the male side: by this plan each class may mutually assist the other in those departments which are best suited for the respective sexes. These buildings must be so designed as to admit of free access, and be situated within the space enclosed by boundary wall: apartments for officers should be judiciously distributed throughout, in order to afford them a perfect surveillance of the prisoners in fulfilling their different avocations.

Airing yards, on a radiating principle, with an inspecting officer's station in the centre, should be constructed at each side of the

prison, with open railings at each end, and of such dimensions as will supply sufficient space for the recreation and exercise of the prisoners.

The space between the boundary wall and the main building should be at least 30 feet, and extend around the entire prison, that free communication may be afforded to all parts. The outer wall must be 20 feet high, in order to prevent the possibility of escape. In many instances space enclosed (if any) by the boundary wall, is so narrow, and the wall itself so low, that it frustrates the intention of preventing the escape of prisoners, and by its construction frequently affords them facilities for so doing. The depth of its foundations should also be attended to, as examples have been known of their having been undermined in a very short time.

The corridors should be sufficiently spacious to prevent the prisoners communicating with each other from opposite cells—say 10 feet in width. The cells (particularly when the separate system is intended to be carried out) should be large enough to admit of the prisoners moving about, and exercising themselves therein: 13 feet by 8 feet are considered good dimensions, and on no account should they be less than 12 feet by 7 feet, and 10 feet high. This proportion is best adapted for inspection. There should be a total absence of wooden floors and ceiling joists; in the first place, for the purpose of preventing communication and the spread of fire. The cells should be floored with substantial flagging, and have ceilings arched with brick. A window must be supplied to each cell, which will admit a proper amount of light, placed at sufficient height from the ground to prevent the prisoner from looking out. All necessary apparatus for the convenience and comfort of the prisoner should be fitted up in each apartment, and furnished with the means necessary for the preservation of his health. The doors ought to be formed of strong oak, sheeted with iron on both sides, with apertures for inspection and for the supply of provisions formed in each.

All the buildings should be constructed on a fire-proof principle.

The only point which now remains for me to draw attention to, is "the system of ventilation and warming to be observed throughout." Up to the present time so many improvements have been made in this department, that it is difficult to know which of the different systems most to approve of; but I have selected that which I consider the simplest and most economical, and which experience has shown to be efficacious. As the principle of ventilation may be reduced to two heads, namely, "the supply of fresh or heated air (as occasion may require), and a withdrawal of foul air," I shall explain how these may be effected. An apparatus is generally placed in the basement story of each side of the building, fitted with all necessary tubes, pipes, &c., with which there is in immediate connection a large cold air-flue, supplied by a shaft out of doors. The air by this means introduced may either be warmed or left at its natural temperature, and passes hence into a flue constructed under the corridor floor, from which small flues branch off, and pass up the inner wall, terminating immediately under the ceiling of the cells, through which the fresh or tempered air is diffused by means of an iron grating. The foul air is extracted by a grating placed near the floor of each cell diagonally opposite to where the fresh air is introduced: this is the opening of a lateral flue which passes down the outer wall, and communicates with a main foul air flue, placed under the floor of basement. All the corridors are similarly ventilated. In order to effect a proper circulation, the main foul air flues are placed in the perpendicular ventilating shaft, on each side of the smoke flue of the apparatus, which is built up between them to about 15 feet of the top. It will be found desirable to construct the smoke flue of iron instead of brick, as the former is much better adapted for the propagation of heat. A damper (which will be under the command of a superintending officer) should be placed in the extracting flue, close to the outer doors of the cells, and so constructed as to leave sufficient room to effect a proper circulation. It would be well to observe that all chance of communication by means of the ventilating flues, should be strictly guarded against by the

* See page 62, *cont.*